The Boston Medical and Surgical Journal

TABLE OF CONTENTS

May 6, 1920

Original Articles.

THE PRODUCT OF A UROLOGICAL CLINIC.

BY WILLIAM C. QUINBY, M.D., BOSTON.

FOLLOWING the precept so admirably laid down by Dr. E. A. Codman in his warm advocacy of an efficient End Result System for surgical patients, such a system has been in use at the Urological Clinic of the Peter Bent Brigham Hospital since this clinic was started in July, 1916. Effort has been made to follow the career of each house patient for at least two years after discharge from the hospital. The present report deals, therefore, with those patients treated during the last half of 1916 and during the whole of 1917. It has not yet been possible, because of the work involved, to follow up ambulatory patients in the Out-Door Department, except in those instances where such patient was previously in the hospital ward; so that in this respect the report does not cover all the work of the clinic.

URETERAL CALCULUS.

1. Woman, No. 4839, aged 58, single, 5-vi-16. Patient entered complaining of pain in left lower abdomen, which had been supposed to be due to a stone in the ureter or kidney. On examination no evidence of stone could be found. Result: 11-vii-18. Has had no further attack, and is quite well, except for chronic indigestion which, she says, she has had all her life.

2. Woman, No. 4871, aged 39, married, 11-vi-16. Question of right nephrolithiasis. Investigation failed to demonstrate stone. Result: 1-vii-18. Patient is free from any symptoms referable to kidney since discharge. She has had one child since then, and following labor has had some soreness in the region of the right kidney, but no attacks similar to those experienced before her entrance to the hospital. She complains now of shortness of breath and pains in extremities, especially in arms. Referred to Medical Department for cardiac condition.

3. Man, No. 5432, aged 33, married, 21-ix-16. Question of renal calculus. Patient was discharged after one day, as examination failed to confirm diagnosis. No further data.

4. Woman, No. 7043, aged 39, married, 16-vii-17. Pain in back for twenty years. Question of renal stone. Sent for urological investigation. No stone or renal disease was found on examination. Patient was discharged five days after entrance. No further data.

5. Man, No. 6166, aged 21, single, 29-i-17. Complaint: Sharp pain in right iliac fossa. Question of appendicitis or renal stone. Cystoscopy showed no evidence of stone. Further observation failed to find signs of appendicitis. Patient was discharged on seventh day. No further data.

6. Man, No. 5571, aged 28, married, 14-x-16. Question of renal stone. No operation as investigation failed to demonstrate stone. Patient was discharged after twelve days. Result: 19-vi-18. Patient has had no trouble similar to that which caused his entrance to the hospital since discharge. He is working continuously and he has no pain. Urine normal on examination.

7. Man, No. 5720, aged 25, 10-xi-16. Pain in region of left kidney. Question of ureteral stone. No operation. Impossible to demonstrate stone. Urine normal. Patient was discharged six days after admission. No further data.

8. Man, No. 7062, aged 36, married, 18-vii-17. Question of ureteral calculus. Cystoscopy. No stone could be demonstrated. Patient was discharged seven days after entrance. Result: 27-vi-18. Letter from patient states he has been in good health since discharge.

9. Man, No. 5949, aged 36, 23-xii-16. Question of hematogenous infection of kidney, or of ureteral stone. No operation. X-ray negative. Urine contained blood on entrance. Symptoms subsided under expectant treatment. No further data.

10. Man, No. 7067, aged 39, single, 18-vii-17. Ureteral calculus. Stone passed before entrance. Question of renal tuberculosis. Cystoscopy showed lacerated ureteral orifice. Pathologist reports no tuberculosis. Patient discharged six days after entrance. Result: 16-vii-18. Has had no pain since discharge. The urine is normal.

11. Man, No. 5940, aged 27, married, 21-xii-16. Question of stone in the ureter. It was impossible to find a stone. Renal function normal. Discharged eight days after entrance. Result: 22-vii-18. Since leaving hospital patient has had one stone removed from urethra, but has otherwise been well.

12. Man, No. 5556, aged 36, 12-x-16. Question of stone in ureter. Exploratory laparotomy. No stone or abnormalities found in ureter. Appendectomy. No complications. Patient was discharged thirteen days after operation. Result: 19-i-18. Patient is well and has had no symptoms since operation.

13. Man, No. 6540, aged 29, single, 3-iv-17. Entered complaining of abdominal pain on the right side thought to be due to appendicitis, but found to be caused by nephrolithiasis. No operation. Stone was passed after cystoscopy and catheterization of ureter. Patient was discharged on the eleventh day. Result: 15-vii-18. Patient has had no symptoms of urinary difficulty since discharge. The urine is normal in all respects.

14. Woman, No. 6538, aged 60, married, 3-iv-17. Stone in left ureter. No operation. Cystoscopy. Injection of papavarin and liquid vaseline into ureter. The stone was of such size that the patient should pass it. Patient was discharged after thirteen days, and a short time later passed stone. Result: 15-vii-18. In answer to letter patient states that she has had no recurrence of trouble.

15. Man, No. 7589, aged 49, married, 25-x-17. Ureteral calculus Cystoscopy showed definite evidence of cystitis with edema of right orifice. Calculus 2 mm. in size removed by intravesical instruments. No complications. The patient was discharged seven days after entrance. Result: 25-vii-19. In reply to letter the patient states that he is well and that old trouble has not returned.

16. Man, No. 7791, aged 44, married, 4-xii-17. Ureteral calculus. Right ureterotomy with removal of stone. Stone could not be moved upward because of slight thickening and constriction of ureter. No complications. Patient was discharged eight days after operation. Result: 17-xi-19. Patient writes that he has felt well since operation, but that last summer he had a severe attack lasting two days, when he passed four stones and a little gravel.

17. Man, No. 7312, aged 27, single, 3-ix-17. Bilateral ureteral stone. Right uretero-lithotomy and later dilatation of left ureter. There was some evidence of peri-ureteral inflammation. Stone 10 cc. below iliac vessels was milked upward. Three fine stitches were taken in ureter. No urine leaked from wound, which healed by first intention. Patient was discharged nineteen days after operation. He returned in two weeks with stone he had passed from left side. No further data.

18. Man, No. 6062, aged 49, married, 11-i-17. Stone in left ureter removed by ureterotomy. No complications. Wound healed on fifth day. Patient was discharged on tenth day, urine still showing occasional leucocyte. Result: 5-vii-18. Except for a pain in his back for a few weeks, the patient has been entirely well. The urine is normal. 9-v-19. Patient's daughter reports that pain in the back has returned. Question as to whether stones are reforming. 20-xi-19. Daughter reports that father's condition is now satisfactory in all respects.

19. Man, No. 7592, aged 29, 21-vi-16. Stone in left ureter removed by ureterotomy. Suprapubic cystotomy. An unsuccessful attempt to locate stone in ureter necessitated opening bladder and passing catheter up ureter. The stone was then removed. Complications: On two occasions the patient had sharp rise in temperature, and the vesical sinus was slow to heal. The patient was discharged on the eighteenth day. Reëntry: No. 4921, 26-x-17. Acute prostatitis and acute epididymitis. The patient was entirely well until two weeks ago. Then had pyuria, terminal hematuria, pain, and frequency. No residual stones were found. Local and symptomatic treatment cured condition.

The patient was discharged about one week after reëntry. Result: 31-vii-18. Has no symptoms of trouble. The urine is normal.

20. Woman, No. 7767, aged 25, married, 28-xi-17. Stone in left ureter. Question of stone in right kidney. Complained of pain in left side. The stone was very low so that operation was first undertaken by opening the ureter through the vagina. The stone could not be removed by this route so that the ureter had to be opened above. By this route the stone could be felt but could not be pushed upward. It was therefore pushed on into the bladder. The wounds healed well and the patient was discharged on the fourteenth day, having previously passed the stone from the bladder. Result: 1-viii-18. Patient is well. Reëntry: 26-iii-19. Patient complains of dull pain in left side and x-ray shows two shadows in kidney region. Left nephrectomy. Convalescence complicated by tonsillitis; otherwise uneventful. Discharged with wound healed on fourteenth day after operation.

21. Man, No. 7321, aged 38, married, 5-ix-17, Left ureteral calculus. Cystoscopy impossible on one attempt. X-ray plate showed shadow. The patient refused further treatment and was discharged after three days, against advice. Result: 29-vii-18. Patient states that he has had no further trouble. The urine still contains pus.

In the first nine cases no stone could be demonstrated by any of the available methods. Although in a number of instances the patient has not replied to letters asking for news, it is not probable that any stones were overlooked, for in this case the chances are that the letter would have been answered. A stone which subsequently passed was not demonstrated on previous examination in Case 11. In Case 16, stones still continue to pass, but there is not yet sufficient reason for any operative interference on the kidney. Case 20 is a fair example of the difficulty encountered at operation when a ureteral stone is impacted in that portion of the ureter crossed by the broad ligament.

HEMATURIA.

Man, No. 5277, aged 32, 26-vi-16. Essential hematuria. No operation. Investigation failed to show cause for bleeding, which ceased on entrance to hospital. Patient was discharged on second day. Reëntry: No. 4954, 20-viii-16. Patient has had many attacks of bleeding since leaving hospital, but blood is not present now. Another examination failed to show source. Patient was discharged after ten days. Result: 11-xii-18. Patient had kidney removed at another hospital, and has since been well.

HYDRONEPHROSIS.

1. Man, No. 6367, aged 19, single, 5-iii-17. Large, left hydronephrosis due to anatomical variation of renal artery making pressure on ureter. Only symptom that of intermittent pain. Possible to make accurate diagnosis by pyelogram. Bipolar arrangement of renal artery found. Pressure relieved by plastic operation on pelvis and ureter. Vessel not cut. Complications: A good deal of nausea and distention for thirty-six hours. Temperature 101° on day after operation. Drain removed on eighth day, and wound healed at discharge from hospital on thirteenth day after operation. Result: 8-viii-19. Patient in good health. Urine normal. Left renal pelvis has contracted to about one-half the size found at operation. It is evident from the pyelogram that the drainage is better than before. The injection of twenty-five cc. caused no symptoms, however. Renal function normal.

2. Woman, No. 7386, aged 24, married, 17-ix-17. Diagnosis: Pelvic mass of unknown character; very poor renal function; bilateral hydronephrosis. Medical service could find nothing suggestive of Bright's disease, but felt that poor renal condition was due to the obstruction in the pelvis. The patient's condition was so poor that to attack the mass in the pelvis was out of the question until function of the kidneys had been improved. It was attempted on the 4-x-17, to relieve the kidneys by a bilateral ureterostomy. This operation failed because ureters were found to be densely involved in firm tissue of chronic, inflammatory nature. Result: Reëntered the hospital medical service several times but was never cured. Gradually became weaker and died on 22-x-18, after a short period of blindness.

It is possible that a bilateral nephrostomy would have succeeded in relieving the kidneys where the operation chosen failed.

NEPHRITIS.

1. Man, No. 5687, aged 59, married, 6-xi-16. A very sick man, complaining of severe headache, and urgent, frequent urination, was transferred from the Medical Service for investigation. There has recently been much loss of general strength and weight. Whites, 40,000. No fever. Investigation showed small amount of pus from right kidney. X-ray negative. Renal function bad on each side. Kidney one-fourth larger than normal at operation. Negative findings. Patient discharged one month after entering hospital. Died about six weeks after discharge. Only possible diagnosis that of chronic nephritis.

Operation was doubtless a mistake of judgment in this instance. But in the presence of

a leucocytosis and evident pus coming from one side, it is hard to see how it could have been withheld.

NEPHROLITHIASIS.

1. Woman, No. 7236, aged 48, married, 18-viii-17. Renal calculus. Left pyelotomy. No complications. Patient discharged on tenth day after operation. Result: 24-x-19. Patient reported in reply to letter that she feels very well, and has had no trouble since operation.

2. Man, No 7391, aged 43, married, 18-ix-17. Bilateral renal stone. Right pyelotomy and nephrotomy. Incision made through lower pole of kidney onto stone, supported by finger through the pyelotomy incision. Anesthesia taken badly. Complications: Definite bronchopneumonia with fever and sputum. Temperature normal after fourteenth day. Patient discharged on fiftieth day after operation. Reëntry: 23-v-18. Patient has felt well except for occasional renal colic on untreated side. Left pyelotomy. No complications. Wound healed on twelfth day. Result: 1-viii-18. Patient feels fine. Urine contains a few shreds.

3. Man, No. 4960, aged 39, married, 27-vi-16. Stone in kidney. Right pyelotomy. No complications. Patient was discharged fourteen days after operation. Result: viii-19. Patient returned to the Medical Department of the Out-Door Department because of indigestion characterized by vertigo, choking, etc. He has had no evidence of recurrence of stone. The urine is normal. 3-x-19. States he has been well since middle of September.

4. Man, No. 5120, aged 31, married, 24-vii-16. Stone in kidney. Left pyelotomy. Stone pushed from calyx into pelvis. Kidney appeared normal. No complications. Patient was discharged thirteen days after operation. Result: 27-vii-18. Patient reports. He has felt well since operation, and has had no pain at any time. Urine normal on examination, and scar well healed.

5. Man, No. 5186, aged 29, married, 7-viii-16. Renal stone. Urine slightly infected. Right pyelotomy. No complications. Patient was discharged nine days after operation. Result: 22-vii-16. Letter from patient states he is very well.

6. Man, No. 5527, aged 35, married, 6-x-16. Stone in the kidney. Right pyelotomy. No complications. Patient discharged on fourteenth day after operation. Result: 31-vii-18. Patient is in good health.

7. Woman, No. 6191, aged 55, married, 1-ii-17. Patient was found to have albuminuria, due to a stone in right kidney pelvis. She had never had any pain in region of kidney. Right pyelotomy. Ureter thickened; pelvis partially intra-renal. Drainage removed on third day and stitches on sixth. Complications: A very slight amount of pus in urine on discharge on eighteenth day. Result: 7-vii-18. Letter from patient states her general health is excellent.

8. Man, No. 6294, aged 46, married, 19-ii-17. Bilateral renal stone. Stone on right had passed into ureter, causing pain. Right ureterotomy. Removal of stone. Attempt to locate stone in left kidney proved unsuccessful. Complications: Both wounds became septic. Much nausea and vomiting. Temperature normal on the seventeenth day. Sinus on right closed one month after operation. Patient was discharged thirty-two days after operation. Result: 17-xii-18. Patient has worked steadily and is entirely free from urinary symptoms. Reported at hospital today for rheumatic pain in shoulder. Urine slightly turbid with pus.

9. Man, No. 6472, aged 40, married, 22-iii-17. Renal stone. Left pyelotomy. Exploration of pylotomy wound, twenty-eight days after first operation. In the first operation drain was placed down to incision in pelvis, another below kidney. In second operation inflammatory tissue at upper end of ureter was freed. Complications: Sinus did not heal after first operation. Patient discharged well on the fifty-ninth day after the first operation. No further data.

10. Man, No. 6841, aged 42, married, 6-vi-17. Left renal stone. Pyelotomy. Kidney was easily delivered, showing induration of fat at pelvis. Complications: Temperature as high as 103 until fourth day. Normal healing of wound. Patient was discharged on tenth day after operation. Result: 16-iii-18. Patient has been in excellent health. Cystoscope shows no evidence of disease, and the urine is normal.

The results of operation in this group of cases is excellent as a rule. In Case 2, the pulmonary complication was clearly the result of the anesthesia. Operation in Case 8 was followed by sepsis in the wounds. Also a tiny stone in a kidney otherwise normal could not be located. The slow healing in Case 9 was doubtless due to the too close apposition of the drain to the pyelotomy incision. No case has thus far shown recurrence of stone.

NEPHROPTOSIS.

1. Man, No. 6142, aged 24, single, 25-i-17. Complaint: Pain in right lumbar region and slight hematuria. Question of renal stone. Pain found to be due to nephroptosis and kinked ureter. No operation. Patient discharged on fourteenth day. Result: 17-vii-18. Patient is neurasthenic. Urine normal.

2. Woman, No. 6311, single, 23-ii-17. Complaint: Pain in right lower abdomen radiating upward to kidney region. Chronic appendicitis. Nephroptosis. Operation: Nephropexy and appendectomy. Appendix removed through inci-

sion for kidney. No complications. Patient was discharged on twelfth day after operation. Result: 24-iv-17. Well and able to walk several miles without pain. Urine normal. 9-vii-18. Patient writes that her health is excellent.

3. Woman, No. 6506, aged 51, single, 29-iii-17. Nephroptosis. Stone in kidney. Left pyelotomy. Nephropexy. Kidney freely movable and very low. Stone impacted in ureter at pelvic junction. No complications. Patient discharged on nineteenth day after operation. Result: 13-i-19. Patient states operation was successful. Wound slightly tender.

4. Woman, No. 6515, aged 22, single, 30-iii-17. Nephroptosis. Chronic appendicitis. Nephropexy and appendectomy. Appendix removed through same incision as that made for kidney. No complications. Patient was discharged on eleventh day. Result: 12-iii-19. Patient in good health. Had married and given birth to a nine-pound baby since operation.

5. Woman, No. 6719, aged 29, married, 11-v-17. Complaint: Severe pain in right upper quadrant. Question of stone in gall bladder or kidney. Patient is pregnant, and the kidney is very freely movable. Exploration of gall bladder. Nephropexy. Neither renal nor gall stone found. No complications. Patient discharged on fourteenth day after operation. No further data.

6. Woman, No. 6921, aged 20, single, 22-vi-17. Nephroptosis. Nephropexy and appendectomy. Appendix removed through wound made for kidney. No complications. Patient discharged on eighteenth day after operation. Result: 31-iii-19. Patient complains of pain in right lower abdomen. Right kidney is palpable midway between the costal margin and right iliac crest. Cecum is rather distended and palpable as a rounded cord.

7. Woman, No. 6968, aged 38, married, 2-vii-17. Nephroptosis. Nephropexy. Adhesions and scars on surface of kidney. Complications: Abscess on arm from hypodermic. Patient discharged on fourteenth day. 14-x-19, result only partially successful. Patient still has occasional pain in side, but is very fat and must work hard. Has much pruritus.

8. Woman, No. 7195, aged 39, widow, 10-viii-17. Nephroptosis. Chronic appendicitis. Nephropexy and appendectomy. Appendix removed through incision for kidney. No complications. Patient discharged on fourteenth day. No further data.

9. Man, No. 7619, aged 63, married, 1-x-17. Adhesions around gall bladder. Nephroptosis. Colecystectomy, and nephropexy. Kidney and ureter normal. Dense adhesions around gall bladder. Second incision removed gall bladder with kink at its neck. No complications. Patient was discharged on eighteenth day after operation, entirely free from pain in back. Result: 9-i-18. Local doctor reports that patient had an acute attack of abdominal pain, bloody vomit, and swelling of the legs, cardiac decompensation, and phlebitis. Patient died in this attack.

10. Woman, No. 6372, aged 30, single, 5-iii-17. Patient complained of attacks of pain in the left flank. Nephralgia due to nephroptosis. Nephropexy. The left renal pelvis held 17 cc., the right 5 cc. Distention caused pain identical with that present during attack. No evident abnormality on kidney surface. Kidney fixed in high position with silk sutures. No complications. Patient was discharged on fifteenth day. Result: 11-xii-19. Patient says that she is feeling well now, except for an occasional pain in her side of slight degree.

In Case 6 it is evident that operation failed to fix the kidney in its normal position. In its present position, however, the kidney is not movable and it is quite probable that the persisting pain is due to chronic constipation.

It might have been better judgment in Case 7 to remove the kidney, since it showed evidence of an old pyelonephritis. The patient's pain has been relieved but not entirely cured.

PYELITIS.

1. Woman, No. 4750, aged 30, married, 19-v-16. Acute pyelitis and pregnancy. No operation. Pus in urine on discharge. Patient discharged subjectively on fifteenth day after entrance, to the care of the prenatal clinic. Result: viii-16. Letter from patient says that she still has an occasional chill and vomiting spell. The baby has been born. No further data.

2. Woman, No. 5382, aged 20, 12-ix-16. Pyelitis; pregnancy. Left pyelotomy for infected hydronephrosis. Kidney found to be enlarged and studded with miliary abscesses. The pelvis was drained. No complications. The patient was discharged on twenty-seventh day after operation, with wound healed. No further data.

3. Woman, No. 5176, aged 25, married, 4-viii-16. Pyelitis. No operation. Right kidney found to be enlarged and low, and urine to contain pus. Fever and general condition improved under treatment by renal lavage. Patient discharged on thirteenth day. Result: 29-viii-16. Pelvic lavage. Urine normal. 12-ix-16. Patient feels entirely well. She has no pain, tenderness, dysuria, frequency, or hematuria. Only complaint is that she tires easily.

4. Man, No. 5793, aged 26, 25-xi-16. Question of stone in right kidney, or of pyelitis. Impossible to demonstrate stone. Symptoms relieved by expectant treatment. Patient discharged on eleventh day. Result: 8-ix-18. Patient in Out-Door Department for pain in calves, etc. No further data.

5. Woman, No. 6747, aged 25, single, 17-v-17. Pyelitis. No operation. Cystoscopy. Patient discharged twelve days after entrance. Result: 12-vi-17. Pain in side relieved. No further data.

6. Man, No. 7053, aged 27, single, 17-viii-17 Bilateral pyelitis. No operation. Cystoscopy. Patient discharged fifteenth day after entrance. Result: 30-vii-18. Operated on two weeks ago for appendicitis. Wound not drained. Symptoms relieved. No further evidence of pyelitis found.

7. Woman, No. 7170, aged 27, married, 4-viii-17. Pyelitis. No operation. Expectant treatment relieved symptoms. Patient discharged five days after entrance.

8. Man, No. 7233, aged 34, married, 18-viii-17. Complained of being "generally run down." Had been in Philippines, where he had amebic dysentery. Investigation showed bilateral chronic pyelitis with considerable hydronephrosis and hydroureter. Urine normal except for considerable quantity of pus coming from each kidney pelvis. Culture from urine continuously sterile. No evidence of tuberculosis by guinea pig inoculation. Renal function 78 per cent. in two hours. Previous to above the patient had been investigated by Medical Service. Spinal fluid and blood serum were both negative for syphilis, and there was no abnormality to be found in the gastro-intestinal tract, nor could amebae be found in stools. Kidney pelves were injected with Dakin solution. There was no reaction to lavage and patient was discharged on following day. No further data.

9. Man, No. 5972, aged 41, married, 27-xii-16. Pyelitis; pyelonephritis; ureteritis. Exploratory pyelotomy. Kidney one-third larger than normal. Ureter much dilated. Patient discharged ten days after operation. Re-entry: 3-ix-17. Pyelitis. Nephrectomy. Kidney found to be of normal size, but unusually adherent at upper pole. Ureter thickened; wound drained. Complications: On tenth day one stitch infected. On the fourteenth day furuncle on right hip was incised. Discharged sixteen days after operation to Out-door Department, with slight cystitis still remaining. No further data.

10. Man, No. 7626, aged 55, married, 2-xi-17. Pain in left side of back found to be due to pyelitis. Treated by pelvic lavage on several occasions, with no relief. Reëntry: 12-ii-18. Left nephrectomy for pyelonephritis. Convalescence complicated by much bladder irritability and severe gastric upset suggestive of old duodenal ulcer. This could not be demonstrated by x-ray, however. Rapid loss of weight was not entirely regained. Discharged on the thirty-third day after operation. 1-v-18. Has been having regular bladder lavage in Out-Door Department. The pain in the back has not been present since operation. Nocturia only once. 9-viii-18. For some time patient has been staying about the same, or even losing ground. In spite of lavage, the urine has not cleared up. He says that on three recent occasions there has been a little blood at the end of the urination. By cystoscope there is little to be seen except diffuse cystitis. The left ureteral orifice is but a small dimple; the right seems normal except that it might be slightly raised above the bladder surface. A catheter on this side is obstructed at about 6 cm.; x-ray shows no stone. 2-i-19. Has been regular in attendance at Out-Door Department, but has continued to grow worse. During the past two months there has been increase in pain, shortening of time between the intervals of urination; and much terminal hematuria. The prostate is unquestionably badly infected, although there is no evidence of abscess. Massage does not control the situation even slightly. Therefore the bladder was opened above the pubis and the prostate removed by this route, with the exception of the posterior lobe. 10-xii-19. Today patient is still no better. He has continued throughout the past year to visit the clinic about once each week or two. He still is unable to work and shows considerable blood in urine.

11. Woman, No. 5543, aged 23, single, 10-x-16. Patient entered for urological investigation into cause of frequency of urination. Cystoscopy. No cause for ardor found except slight pyelitis. The urine is sterile at present. Patient was discharged after eighteen days. Result: 30-v-18. In answer to letter patient says that aside from getting tired and rather nervous at times, she has gotten along very well since her discharge from the hospital. Occasionally she has a little pain through back and side which is similar to pain she experienced after being cystoscoped. The pain does not last long enough to be troublesome. Her periods are still irregular, which makes her head feel badly when going over the time.

PYELONEPHRITIS.

1. Woman, No. 5575, aged 27, 16-x-16. Acute unilateral pyelonephritis. Severe pain with high fever. Pyelotomy for renal drainage. Edema in perirenal tissues. Kidney one-third larger than normal, and purplish in color. Partial decapsulation. Cortex studded with miliary abscesses. No complications. The patient was discharged on the fifteenth day after operation. Result: 21-xi-16. Gain in weight and general condition. Feels very well. 17-v-17. Renal function examined previous to appendectomy finds sterile urine from right and left kidney, and normal phenolsulphonephthalein output. 30-xi-19. Husband reports that patient has remained well.

2. Woman, No. 6101, aged 35, married, 17-i-17. Gall stones, pyelonephritis. Angulation

of ureter. Cholecystotomy. Fixation of kidney. The thickened, kinked ureter was relieved by by high fixation of kidney. The gall bladder was opened through the same wound. No complications. The patient was discharged nineteen days after operation. Result: 16-xii-18. Patient has been entirely well with no recurrence of pain since operation. There is entire absence of urinary symptoms, and the digestion is much better than it has ever been before. Patient is able to work hard without ill effects.

3. Man, No. 6397, aged 34, single, 9-iii-17. Fractured spine. Pyelonephritis. Vesical calculus. Patient of Dr. Cushing. No operation advised. Course in muscle training by Dr. Lovett. Neurological care by Dr. Taylor. Bladder lavage and extraction of calculi by Dr. Quinby. Patient remained in the hospital about five months. Result: vi-18. Patient has left Boston and is under the care of Dr. Barney, who has removed a large, calculous, pyonephrotic kidney.

4. Woman, No. 7025, aged 61, widow, 12-vii-17. Pyelonephritis and renal stone. Pyelotomy for stone. Kidney showed an enlarged double pelvis. One or two nodular areas in lower pole of organ. Complications: Patient had slight intermittent fever for nine days. Wound healed well. Discharged on twenty-second day after operation. Result: vii-18. From report of daughter, patient is having some symptoms of cystitis, making it probable that although the stone in the kidney has been removed, the infection has not been cured.

5. Man, No. 7519, aged 25, 13-xi-17. Pyelonephritis. Right nephrectomy. (Congenital aplasia.) Easy uncomplicated operation. Stitches out on sixth day and wound healed well. No complications. Patient discharged on twenty-second day after operation. Result: 30-xi-18. Patient entirely normal except that he is very neurasthenic.

6. Woman, No. 7722, aged 38, married, 19-xi-17. Right pyelonephritis with stone. Nephrectomy. Kidney densely adherent. Wound closed without drainage. No complications. Patient discharged on fifteenth day with slight remaining cystitis. Result: 18-xi-19. Has made a perfect recovery. Weighs twenty-five pounds more than when operated on.

7. Woman, No. 5776, aged 50, married, 22-xi-16. Infection and stone in right kidney. Nephrectomy. Kidney appeared to be aplastic. No complications. Patient discharged on seventeenth day after operation. Result: 4-vi-18. Patient comes to report. She has gained weight and is entirely well. Phenolsulphonephthalein excretion 60 per cent. Urine normal.

8. Woman, No. 6201, aged 33, married, 4-ii-17. Pyelonephritis. Hydronephrosis. Left nephrectomy. Kidney densely adherent. Last rib resected. Impossible to isolate pedicle. Necessary to dress wound. Stitches out and wound healed on ninth day. Patient discharged on fourteenth day after operation. Result: 15-vi-19. Patient reported at hospital. Has borne a child since operation. Health normal.

9. Woman, No. 6266, aged 45, widow, 16-ii-17. Pyelonephritis with stone. Left nephrectomy. The kidney was badly infected. The stone was found low in the pelvis. The ureter was dilated and very friable. Rupture with slight wound soiling. Complications: Some fever for about three days. Discharged on twenty-fourth day with wound healed except for a very small sinus. Result: 28-iii-17. Wound entirely healed and urine nearly free from pus. Discharged from Out-Door Department as well. No further data.

Case 1 may perhaps better be classed as an instance of acute hematogenous infection of the kidney. The very acute clinical picture demanded operation, and although it is hard to explain the effect of mere drainage of the pelvis and decapsulation, nevertheless recovery in this instance was perfect.

The poor result in Case 4 is doubtless due to a mistake in surgical judgment: the kidney should have been removed. But it is very hard at times to estimate accurately the relative importance of the two factors, stone and infection, in the causation of symptoms.

Cases 4, 5, and 7 illustrate the propensity with which a kidney showing a developmental anomaly becomes later the seat of disease. In the first instance there was found a double pelvis, and in the latter two the kidney was very small and showed fetal lobulations, with proportionate small caliber of the renal vessels.

PYONEPHROSIS.

1. Woman, No. 5642, aged 60, married, 25-x-16. Pyonephrosis. Incision of large perinephritic abscess followed by nephrectomy twenty-five days later. No complications. Pathologist's report: Tuberculosis. Patient discharged nineteen days after second operation. Result: 24-vi-18. Patient well. Slight weakness of scar.

2. Woman, No. 5789, aged 23, married, 24-xi-16. Pyonephrosis. Attempted nephrectomy. Necessary to stop because of poor condition and severe hemorrhage from adhesions surrounding kidney. Second stage nephrectomy five days later. A short, easy operation. Eight days later incision of ischiorectal abscess. No complications, except that of ischiorectal abscess. Patient was discharged forty-four days after

admission, and twelve days after third operation. Result: 29-viii-18. Patient has gained fifty-seven pounds, and has no symptoms. The urine still contains a little pus and some bacteria.

3. Woman, No. 5560, aged 42, single, 12-x-16. Pyonephrosis with stone. Nephrectomy. Kidney was found to be twice normal size, diffusely fluctuant. No complications. Patient was discharged on seventeenth day after operation. Result: vii-18. Well in regard to urinary difficulty. The urine is normal. Advised to enter hospital for correction of uterine procidentia.

4. Woman, No. 5989, aged 47, single, 30-xii-16. Renal stones. Pyonephrosis. Slight cystitis. Nephrectomy. Kidney formed a mass twenty cm. long. Peritoneum had to be dissected from the anterior surface of it. No complications. Patient was discharged healed on sixteenth day. Result: 25-vii-17. On examination, patient seems to be entirely normal. She complains, however, of several vague abdominal pains.

5. Man, No. 6374, aged 54, married. 5-iii-17. Renal stone. Pyonephrosis. Previous unsuccessful attempt to remove kidney four years before entering hospital. Left nephrectomy. Hard and lengthy operation. Much perineal scar tissue. Necessary to resect last rib. Subcapsular nephrectomy. Closure of wound not entirely satisfactory because of old scar. No complications. Patient discharged on seventeenth day. Result: viii-18. Patient has been relieved of all symptoms. Urination normal, and urine free from pus.

6. Man, No. 6421, aged 44, single, 14-iii-17. Bilateral pyonephrosis. Question of polycystic kidney. No operation. Patient first on medical service and then transferred for emergency operation, which he refused. Patient died at home, 30-iii-17. No autopsy.

7. Man, No. 6585, aged 53, married 11-iv-17. Pyonephrosis. Perirenal abscess. Gangrenous cystitis. Entered hospital acutely sick and evidently septic. Temperature 104, pulse 90, respiration 28. Three years ago there were evident signs of disease in the right kidney, which have not been entirely cleared up at any time since. Six days ago the present attack began with pain in the loin, fever, vomiting, and partial suppression of urine. Under gas-oxygen anesthesia a large perirenal abscess and a disintegrated kidney were quickly drained. The patient died five days later with rising pulse and temperature, and signs of general sepsis. No autopsy permitted.

8. Man, No. 5071, aged 30, single, 14-vii-16. Perinephritic abscess. Question of pyonephrosis. Drainage of renal abscess. Complications: Slow healing of sinus which was still present on discharge on twenty-third day after operation. Result: 15-xii-16. Patient still discharging urine through sinus. No further data.

The result of operation in cases showing so severe disintegration of the kidney as do this group, is often brilliant. Whenever the condition has persisted to the point of generalized infection with septicemia, however (as in Cases No. 6 and No. 7), death usually occurs in spite of relief of the local condition. In Case No. 8, it is possible that a mistake in judgment was made in allowing the patient to leave the hospital before the possible need of nephrectomy could be decided. The presence of a urinary sinus in the loin five months after operation would suggest the advisability of further investigation.

(To be continued.)

SOCIAL SERVICE AND THE CLINIC.

BY ALFRED C. REED, M.D., SAN FRANCISCO, CAL.,

Chief of Medical Clinic and Assistant Clinical Professor of Medicine, Stanford University Medical School.

A MODERN medical clinic without a social service department is an anachronism. It is necessary no longer to urge the institution of a social service department as an integral and co-ordinate unit of every general hospital and clinic. It has proved its worth by taking over certain duties necessary but distasteful to the physician, and by adding that important link of after-care to the diagnosis and scientific treatment which have been provided in the hospital or clinic.

A further and related field has developed around the amelioration of home conditions and the investigation of contacts discovered in the course of the patient's post-hospital and post-clinic experience. Very briefly it is intended here to discuss the common points on which the medical clinic and its social service department meet, and the principles which underlie their harmonious coöperation.

It is doubtless true that the physician is the strategic center and most essential unit of the great majority of charitable and benevolent enterprises. To recognize the degree to which he is vital to these, it is only necessary to abstract the entire medical element from any such enterprise and see how much of a practical or coherent organization is left. It is also doubtless true that too often the medical relief program of various social agencies is presented ready-

made to the physician by laymen, and the physician is neither consulted nor seriously considered in its arrangement. To whatever extent this situation exists, it is in no sense a reflection on the social agency. It may even be a credit to the lay public. *It does reflect on the physician.*

If the physician does not assume and exercise that leadership in social medicine which is his by right of professional heredity and training, then he must expect to see this leadership go to others. These may be less expertly trained, and may lack any lineage of professional ideals and traditions, yet nonetheless to them will go the leadership. And further, if the physician contents himself with refusing to accept the ready-made program submitted, he can expect to see cults, quacks and isms step gladly in to assume his rôle of teacher, healer and minister. Assuredly the physician must live up to the obligations of his professional heredity and his training, he must take a guiding and influential lead in the organization and administration of social agencies, if he would preserve a noble reputation from decay, and if he would not be the cat's paw of more benevolent but less skilled laymen.

In no field of social work can the physician better exemplify these doctrines than in the social service department of the clinic. Here he can learn the social point of view, the problems of after care and the practical difficulties of following medical advice, and, in turn, he can instruct the social worker in medical goals and methods, and in the nature of the medical problems appearing. Here the physician and the social worker can each at once be teacher and student, to their inestimable mutual advantage.

CRITICISM OF THE CLINIC.

Criticism of the public free clinic in general can be referred to one of three heads.

1. Abuse of the clinic by patients able to pay. This criticism is heard chiefly from physicians, both within and without the clinic staff, who feel that to a certain extent, the clinic is in competition with private practice. To whatever degree this is true, the criticism is justified. As a matter of fact, however, experience in the Stanford clinics confirms experience in the larger eastern clinics to the effect that probably not over two per cent., at a maximum, of clinic patients are really able to pay private fees. Included in this number of course are those who consciously seek free medical service when abundantly able to pay for it, and therefore when not entitled to it. The bulk of this possible two per cent. are, however, those "borderline" cases, where it is difficult to decide whether free treatment is proper or not.

These borderline cases require careful judgment and social study, which, in turn, demand time. It is safe to say that as a general rule judgment must rather incline here toward leniency, as it is better to treat several undeserving patients free than to turn away one patient who deserves clinic service. No fixed standard can be applied. Each case must be considered on its individual merits. Judgment of these merits requires tact, social skill, experience and time. What physician possesses all of these necessary attributes, or possessing them, will use them all? Here is the need for the social service department illustrated.

In short, prevention of abuse of the clinic by patients able to pay, rests with the social service department. In an attempt to meet the problem of the borderline patient, the patient who is not quite able to meet private fees, but is not entitled to free treatment, there has been developed at Stanford a pay diagnostic group, where for a fixed and moderate fee, a patient can spend three days in the hospital and receive the benefit of group diagnosis and complete laboratory examinations. This group comprises men from the various out-patient clinic staffs. Another plan in operation in some places, is to make a small fixed charge for each visit to the clinic and allow the social service department to excuse needy patients from paying this fee.

2. Clinics are subjected to a limited amount of criticism on the score that they act as feeders for the private practice of the attending medical staff. Insofar as patients are found by the social service department to be ineligible for free clinic service, it is right and proper that they should be sent to reputable and well-trained physicians. It is entirely fitting that these physicians should be the attending physicians of the clinic. Reference of such patients should be in rotation to members of the clinic staff, on the basis of private patients quite apart from the clinic.

3. The most valid criticism of the clinic is that of poor service to the patient, wholesale medical practice, aiming at number and quan-

tity rather than at careful efficient scientific work. As with the first two objections, so here, the social service department offers a solution of the difficulty. By saving the doctor's entire time for strictly professional work, the social service department makes it possible for him to do better work for each patient. Full and careful clinical records, preserved in a permanent file, will go far toward improving the character of clinic service. Not a large clinic, but a clinic characterized by careful and accurate diagnosis and treatment, should be the objective. It would be just and well if every city doctor spent regular hours in clinic service. It would improve the service and the doctor, as well as enabling the doctor to render systematically that modicum of charitable service which is rightly expected of him.

FUNCTION OF THE CLINIC

1. The first and paramount function of the clinic and the one primary reason for its existence is service to the patient. This absolutely must take precedence over every other consideration. Service to the patient comprehends diagnosis, immediate symptomatic relief, medical and surgical aftercare, social relief, contact and family investigation and relief. It is unnecessary to elaborate on the important ways in which the social service department coöperates with the medical staff in attaining each of the desirable ends.

2. Service to the doctor. The clinic subserves the valid purpose of improving the doctor in theory and practice. It is in no sense a free experimental field for exploitation of the patient. Nevertheless scientific improvement of the doctor should be a conscious part of the program and ideal of the clinic.

3. Service to the student. The teaching clinic can offer the highest type of service to the patient. It can in turn give the student invaluable instruction in ambulant medicine, instruction which can be obtained nowhere else.

4. Service to the community. Like the hospital, and to an even greater degree, the clinic should be a community center, the point from which radiate all public health activities and propaganda for the territory tributary to it. It is not necessary to expatiate on the development of this idea. It represents the stronghold of the medical profession, and the unit through which it is to maintain itself in the stress of present social conditions.

Among the important relations of the clinic from the standpoint of community service may be mentioned the after-care and follow-up of patients: the instruction of practical nurses from among the girls and women of the community: classes of instruction in various phases of infant and child nurture, domestic arts, sanitation, personal hygiene, preventive medicine, first aid, mental hygiene, etc.; care of disease in the home; education of the community in the broader phases of better housing, industrial physiology, and the program of modern scientific medicine. Through the social service department the community should be educated in the value of periodic physical examinations, and examinations in health for incipient disease. This could well be made a separate department of the clinic.

The clinic should be a community institution and a community center for public health propaganda and activity. The tributary community should feel a proprietary relationship to the clinic. Here, even more than in the other functions enumerated, the social service department reaches the acme of its possibilities and opportunities.

FUNCTIONS OF THE SOCIAL SERVICE DEPARTMENT.

In a sense the functions of the social service department have already been indicated. They may, however, be summarized briefly as follows.

1. Follow-up for (a) social relief of patients, (b) continued treatment, (c) protection and care of contacts and families.

2. Investigation of patients applying for admission to clinic. It is short-sighted and illogical to belittle the actual importance of investigation of patients applying for relief in the clinic. Not all patients require such investigation. But a varying percentage do require it, and require it for the legitimate protection of the medical profession, of the supporting charitable agencies, and of deserving free patients. To call such investigation "detective work" may describe it but does not decrease its necessity. All constructive social relief is founded on "detective work." Instances multiply in the mind of the miscarriage of social relief where it is not based on the proper sort of "detective work" or social diagnosis.

Investigation of persons applying for clinic relief is absolutely necessary but it is not the

doctor's job, and if he undertakes it, he merely takes time better spent in professional activity, and exposes himself to wholly unnecessary criticism, and the suspicion of using the clinic as a feeder of private practice.

3. Training of nurses and social workers. It is of the utmost importance that social workers as a class should have an accurate first hand knowledge of the aims and methods of medical practice, of the ideals and difficulties of scientific medicine. Acquaintance with social problems from the medical point of view will wonderfully enrich and broaden the social point of view. Nowhere, not even in the hospital, can this instruction be afforded more favorably than in the clinic social service department. Nurses' training schools should afford at least to those nurses who elect it, and to those looking toward public health nursing, the advantage of service under a trained social worker, in the social service department of a clinic.

CONCLUSION.

The relation of the social service department to the clinic has not yet reached its full and proper development. This development requires coöperation and greatly increased mutual knowledge on the part of the social workers and the medical staff of the clinic. The work of the clinic, comprising all that is included by social and scientific medicine, can best be translated to the community through the agency of the social service department.

THE TECHNIQUE OF LUMBAR PUNCTURE.

By Lawson G. Lowrey, A.M., M.D., Boston,

Chief Medical Officer, Psychopathic Department, Boston State Hospital; Instructor in Neuropathology and in Psychiatry, Harvard Medical School.

This slight operation which, with proper technique, is almost painless, may become the source of considerable torture to the patient if not properly carried out. The technique is, however, simple, yet in the hands of many seems extremely complex. The main points are coolness, exact anatomical knowledge, careful direction and the coöperation of the patient. Good coöperation is often difficult to secure, largely because of the fear of the patient or, in psychotic people, because of the psychosis.

Certain points in the technique have struck me with particular force and I wish to emphasize these in connection with a brief description of lumbar puncture.

Position: Puncture may be done in either the upright or lateral decubitus positions. Having used both, I much prefer the lateral position. The patient lies on the right side with knees and chin as nearly as possible in opposition with the chest. This makes a nicely rounded back in which the anatomical land marks may most easily be recognized. Patients are told in simple language that if they hold the position the pain will be like that of a pin prick; that they are going to be pricked; that the anticipation is worse than the realization. In other words the operation is explained and the patient reassured. An attendant holds the patient in the position, exerting as little actual force as may be necessary.

Asepsis: It is unnecessary to emphasize the importance of absolute asepsis on the part of the operator. He should prepare himself with the same care that he would for any other operation. The needles should be thoroughly sterilized by boiling, and the tubes into which the spinal fluid is drawn should be sterile (in order that the tests shall not be interfered with by bacterial contamination).

We have found a very simple preparation of the patient to be entirely satisfactory. The selected portion of the back is painted with tincture of iodine and no more elaborate asepsis is apparently necessary. Many thousands of punctures have been done here without ever recording any instance of infection as result.

Needles: We find that the most satisfactory type of needle is one devised by Leshinsky of New York. This is made of a nickel alloy. It is flexible and will bend to almost any angle without breaking. It is made in much the style of the original Quincke needle, with a stilet that is always ground in position when the needle is sharpened. The ordinary Luer syringes can be fitted to the needle for medication or when aspiration may be necessary.

One of the important points in satisfactory technique is that the needle shall be sharp. With a good sharp needle there is much less probability of excessive pain to the patient.

Land Marks: The *site* of election for lumbar puncture is between the third and fourth lumbar vertebrae. This space is usually the widest. With the back in the right position, however,

lumbar puncture may, with entire safety, be performed in the second and fourth spaces and rarely in the first space. In children, one needs to remember that the spinal cord extends to a lower point in the vertebral canal than it does in the adult. In the adult the lower end of the cord is usually about at the first lumbar intervertebral disc. Accordingly, punctures below this point may be done without danger of injuring the cord. The third lumbar space is, as a rule, about on the level with the crest of the ilium. This constitutes a useful guide in fat people, when palpation of the spinous processes may be uncertain.

One must be careful to find the middle line and one must be careful to allow for spinal curvature, if such exists. The *point* of election for puncture varies. I prefer to go in the middle line, going through the thinnest portion of the supraspinous ligaments, and so straight in, whereas others prefer to take a point about five millimeters to the right of the middle line, thereby avoiding the supraspinous ligaments altogether. However, I find that I am able to direct the needle more accurately if I take the middle line than if I go to one side. At times, however, as where there are many exostoses of the spinous processes, it may be necessary to go to one side in order to avoid the bone.

Direction: With the index and middle fingers of the left hand, the operator locates the point at which he wishes to do puncture. With the elbow raised these two fingers are applied to the middle line from the left side of the patient. Having found with the middle finger the spinous process below which we wish to insert the needle, and having ascertained the general characteristics of the space with the index finger, the index finger is then pulled downward on to the spinous process of the next vertebra, thus rendering the skin tight and leaving a space between the two fingers, corresponding to the intervertebral space into which the needle is thrust.

Most of the difficulties in puncture, which are not to be explained by lack of coöperation, are due to the failure of the operator properly to direct his puncture. Having located the space with the thumb, he takes the thumb away and jabs at the space with the needle, or perhaps he marks it in some way and then jabs. The difficulty here is that the relations are not precisely kept in mind at all times, as they may very easily be if the fingers are kept in position in the manner described above.

In quiet, coöperative patients, in whom the land marks are at all palpable, the above method will obviate the necessity for punching and poking around and causing the patient great pain by bringing the needle in contact with the periosteum. If one is careful to keep the mid line, to direct the needle at right angles to the longitudinal axis of the column, to select carefully his space and then go through it with equal care, results are very good indeed. Rarely, however, bone will be encountered in an unexpected place. In such cases, by withdrawing the needle slightly and altering its direction, always in the axis of the column, we are usually able to get into the canal without further difficulty.

Having found the proper place, the needle should be quickly passed through the skin and then further progress may be more slowly made. If the needle is slowly pushed through the skin, the pain is considerably increased and the tendency to arch the back forward is also increased. This is one great advantage of a sharp needle.

The pain of lumbar puncture comes: (1) when the skin is pierced; (2) if the periosteum is touched; (3) referred pains occur when bundles of nerve are struck. In the normal case no referred pains will be complained of, since the nerves being movable slide out of the way of the needle. But in cases with meningitis, when the nerves are matted together and so do not evade the needle, pains may be referred to the leg; and rarely we may get involuntary kicking, due to irritation of motor roots.

One can usually tell when the needle is entering the spinal canal. There is a slight increase in resistance to the passage of the needle, when the dura is reached, and this suddenly gives way to non-resistance, often with a slight sound which is perceptible. This very characteristic feeling of loss of resistance indicates the proper time to stop inserting the needle.

Care must be taken that the needle goes in straight and not to one side. Occasionally this occurs and the point of the needle is inserted into the dural space at its lateral margin. In such cases very little fluid will be obtained. By partially withdrawing the needle and redirecting it straight, fluid may be gotten.

Care must be taken not to over-run and go into the bone or intervertebral disc at the front

of the canal. This is painful and often gives slight hemorrhage into the fluid.

In many cases the fluid does not run very rapidly and we have found that by twisting the needle, without varying its depth of introduction, the fluid will nearly always run out at a sufficiently rapid rate. Just why this should be so is not entirely clear.

One should not withdraw more than 10 c.c. of fluid, except in cases which are to be treated. It is safer to withdraw smaller than larger amounts, because of possible after effects. When a sufficient quantity of fluid is obtained the needle should be quickly withdrawn.

The iodine is then washed off the back with alcohol, flexible collodium applied to the point or points of puncture and the patient is put to bed for 24 hours. During this time he should lie flat on his back, without a pillow, and it is somewhat advantageous if the foot of the bed be raised. He should have only a liquid diet during this time.

After-symptoms of puncture do not, as a rule, occur in those with a meningitis. It is very rare indeed for a paretic or other case of neurosyphilis to suffer any discomfort after lumbar puncture. Cases with normal meninges, however, often have headache and sometimes nausea and vomiting, particularly if they have not kept quietly in bed or if an excessive amount of fluid has been withdrawn. In case headache and nausea are complained of, we find that potassium bromide, in 20 grain doses, given once, or twice if necessary, will often suffice to correct the headache and nausea. At times a mild grade of headache may persist for several days. Very rarely the discomfort is so acute that it is necessary to give a hypodermic.

SUMMARY

With some coöperation on the part of the patient and a good technique, lumbar puncture is a simple and practically painless operation. With good technique it may be successful even in the absence of coöperation. The major points in technique are: Accuracy of position, accuracy of direction, quickness, knowledge of where to go and when to stop. The after care of patients is simple, but they may require sedative medication, if any unpleasant results, chiefly headache and nausea, occur.

A MILK-BORNE EPIDEMIC OF TYPHOID FEVER AND THE DEMONSTRATED VALUE OF THE WIDAL REACTION IN DETECTING A TYPHOID CARRIER.

BY EDWARD B. BIGELOW, M.D., WORCESTER, MASS.,
AND
GUSTAF L. BERG, WORCESTER, MASS.,
Inspector of Milk, Worcester Board of Health.

IN the first nine months of the year 1919, Worcester, Massachusetts, a city of 190,000 inhabitants, had twenty-one cases of typhoid fever with one death therefrom. In the last third of October and the first few days of November an epidemic of twenty-five cases occurred, with three deaths. Two of these three deaths took place outside of Worcester. On October 21, the first six of these cases were reported to the local Board of Health either as typhoid fever or specimens of blood were sent in for Widal reactions. An immediate investigation was instituted. All six cases were found to be upon the route of one distributor, whose plant was in a neighboring town. His milk passed through a mixer. His delivery daily was 1600 quarts. In this city the average consumption of milk each day is .4 of a quart per capita. There is a possibility, therefore, that the milk was distributed among some four thousand people.

This distributor, his family and employees, numbering eleven, were not sick, gave no history of recent illness or past typhoid. Their Widal reactions were all negative. He secured his milk from thirty-nine dairies, none in the city limits, but all within a radius of fifteen miles. On these dairy farms two hundred and five persons were found to live. Four of them were sick. Eight gave a history of previous typhoid. One of the sick, a child, was definitely diagnosed as a case of typhoid fever. This child from the onset of symptoms had clinically been sick the same length of time as the cases reported in Worcester. Therefore this case of typhoid was not the source of the epidemic. The other three cases of sickness did not prove clinically to be cases of typhoid and their Widal reactions were negative. Specimens of blood from the eight persons with a typhoid history, with the exception of that of one man, gave negative agglutination reactions with typhoid bacilli. The man, whose blood gave the positive Widal reaction in a dilution of one to fifty, was the father of the child with typhoid fever. At once urine and feces in sterile containers were ob-

named from him. Upon examination of these specimens in the laboratory of the Worcester City Hospital, typhoid organisms were recovered from the feces. The urine was negative.

After obtaining the positive Widal it was learned on further questioning that this man had typhoid fever in 1906. Since then he had been carrying on his own farm and selling from twenty to one hundred quarts of milk daily. He also gave a history of typhoid fever among the customers upon his milk route in previous years. So a request was then made of the State Board of Health for a report of any investigation that might have been made previously. These interesting facts were brought out from their report. In 1907, the year after this man had typhoid fever, his wife and daughter had it. In that same year, among customers of his milk in the near vicinity of his farm, there were two additional typhoid fever cases; in 1908, two; in 1911, two; in 1912, two, and early in 1913, six cases. In 1909 there were two cases and in 1910 another one in the neighborhood, which may have had some connection with his farm. At the same time as the six local cases early in 1913 there were twenty-eight more in a distant community, which received milk from his farm through an intermediate distributor. None of these cases came under the jurisdiction of the Worcester Board of Health.

The interesting circumstances in this epidemic, as in several other epidemics that we have investigated, are: (1) The small number of persons actually developing typhoid fever among those who may have ingested the organisms. (2) That dairymen, who are carriers, though excreting typhoid organisms continuously for weeks and months at a time, with occasional intermittances, rarely contaminate the milk. In this case, probably, the milk was dangerous only on one day, as the cases were clinically all of the same age. (3) The value of a positive Widal reaction as an aid in the detection of carriers has been previously advocated and proved.[1, 2] Usually a short time after defervescence the blood of typhoid patients, except in strong dilutions, loses its agglutinating properties. Therefore, if necessary in the search for the source of an epidemic on a milk route, specimens of blood may be obtained from all persons residing on the dairy farms. Those persons, specimens of whose blood give positive agglutination reactions, are much the more likely to be old harborers of the organism. The more laborious task of examining urine, feces, and even the discharges[2] from chronic post-typhoidal sinuses can at first be limited to such persons with the expectation that the carrier will be earlier and more easily located.

REFERENCES.

1 Bigelow, E. B.: Jour. A. M. A., Oct. 28, 1911, Vol. lvii, p. 1418.
2 Bigelow, E. B.: Jour. A. M. A., May 4, 1912, Vol. lviii, p. 1339.

THE USE OF BLOOD AND BLOOD SERUM IN THE TREATMENT OF DISEASE.*

BY C. K. JOHNSON, M.D., BURLINGTON, VT.,

Professor of Pediatrics, University of Vermont.

THERE has been considerable advance recently in our knowledge of using blood in the treatment of disease both as to methods of use and a broadening of its field of usefulness. Several methods have been brought forward from time to time as the Carrel end to end anastomosis. The syringe method of Lindeman. The use of whole blood, blood serum or horse serum.

The methods of Carrel and Lindeman have given excellent results in the hands of those well trained in the necessary technique.

The use of blood injections has been a life saving measure in many cases of hemorrhage. In the hemorrhages of the new born its use has greatly reduced the mortality rate.

In the world war blood injections have undoubtedly saved many lives. The citrated method was the most in favor. Zingher has done extensive work with transfusion by different methods and speaks of it in the highest terms, calling attention to the great empiric value of fresh blood, of its great nutritive value, its marked stimulating properties, and its well known antibody content.

He used 4 ounces up to four years of age and 6 to 8 ounces in older children and adults, favoring the intramuscular injections on account of its more rapid absorption, using an ounce Record or Luer syringe with a needle of 17 or 18 gauge, adding one ounce of blood to one cubic centimeter 10 per cent. sodium citrate solution.

Zingher also says that when treating septic cases with a doubtful prognosis we should include the administration of this harmless yet often efficient remedy.

* Read before the Burlington Clinical Society, December, 1919.

Brenizer has recently described a simple method of transfusion in which the operation needs but little assistance. There are apparently cases of hemorrhagic disease of the new born, in which the injection of blood fails to check the hemorrhage, but its use is so generally successful that it should be used in all cases. In my own experience I have seen two of these cases where the transfusion seemed to be of but little value, while in others good results have been almost immediate.

Dunn remarks that it should be remembered that cases due to bacterial infection, syphilis, ulcer of the stomach or intestine are not favorable for this method of treatment. If this statement is correct this may account for the occasional failure from the transfusion method.

As already stated, it seems that absorption takes place more readily if the injections are made intramuscularly and this method should be more generally used when injecting diphtheria antitoxin.

Convalescent serum has been gradually extended in its field of usefulness as a therapeutic measure. Some years ago the use of convalescent serum in severe cases of scarlet fever was shown to be of value; more recently it has been used in infantile paralysis, and in the recent epidemic of influenza very encouraging results are reported in the cases complicated with pneumonia. Some months ago I reported a case of influenzal meningitis apparently cured by the use of convalescent serum used intraspinally and intramuscularly. This I believe is the first case of this condition in which convalescent serum has been used. This boy now seems perfectly well one year later.

Richardson and Connor report that blood serum from patients convalescent from measles conveyed considerable immunity. As to methods of transfusion, one deserves special consideration: this is the use of the longitudinal sinus.

Fisher has said that this sinus was left accessible for emergency. Marfan was the first to use for emergency. Marfan was the first to use this solution. At this time Tobler described the anatomy of this region and the necessary technique. Helmholz followed by describing a special apparatus for injecting blood by this route.

To enter the sinus the needle penetrates the skin and fibrous tissue a depth of about ¼ inch. The widest part of the sinus is at the beginning of the suture just posterior to the fontanelle, at this point measuring from 5/32 to 6/32 of an inch. A needle about 1¼ inches long of 18 to 20 gauge is advisable. Some operators prefer a needle with a short bevel others one with a long bevel: but in either event it is advisable to introduce the needle with the bevel parallel to the skin. There is very little pain produced by the procedure, cases having been reported where blood has been withdrawn without awakening a sleeping infant. This sinus is now frequently used for the introduction of arsphenamine, diphtheria antitoxin, saline solution, dextrose solution, whole blood, blood serum and sodium bicarbonate solution, also for securing blood for culture or for the Wassermann test.

It has frequently been impossible or at least very difficult to secure access to a vein in infants and I am sure that the use of the longitudinal sinus will be more general as we become familiar with this avenue of approaching the blood stream.

Lindeman has recently reported good results from transfusion in cases of tropical sprue, pernicious anemia, gas poisoning, nephritis, leprosy, and in patients with severe hemorrhage. He says that there is no condition so grave, from hemorrhage, alone, that a patient cannot be revived by blood transfusion.

Infants with jaundice, delayed clotting time, and a tendency to hemorrhage may be greatly benefited by the injection of blood. It may also be useful in the treatment of purpura. It is unnecessary to say that hemolytic tests should be made in these transfusion cases unless the emergency is great.

I wish especially to draw your attention to the use of blood in infants with anemia and malnutrition, thinking that in some cases it is a valuable adjunct to other methods of treatment.

Good reports from the use of blood in these cases come from Kerley, Koplik, Freeman and others. Freeman also reports good results in these cases with the use of horse serum, but states that there was a lessening of the improvement when the injections were stopped; and when the injections were resumed the infants again began to gain. He believes it is useless to inject less than 20 cubic centimeters of serum. In these cases with repeated injections as with the use of diphtheria antitoxin the skin test should be used.

Langly Porter has recently used horse serum

intraspinally in the treatment of chorea, after the method of Goodman, and reports favorable results.

Much has been written regarding the advantages and disadvantages of the so-called citrated method and whole blood injections and the production of reactions. Both methods have their adherents. Brithlingham states that no method is reaction free while others seem to look on a moderate reaction as of favorable omen. In my cases I have used blood from the parents, more often from the mother, except in a few cases where horse serum was used, and have had no unfavorable results.

Case 1. Male, 4 months of age. Instrumental delivery, birth weight, 7¾ pounds. A large cephalhematoma developed after delivery and persisted for some time. Breast fed one week then given a high fat mixture, considerable disturbance resulting, so when first seen by me at 4½ months of age the weight was 7 pounds, ten ounces. There was marked malnutrition, pallor, edema of ankles and hands. By changing to a low fat in the food the digestion was somewhat improved but there was very little general improvement. A blood examination showed the following: Hemoglobin, 20%; red cells, 2,120,000; whites, 8,100; polynuclears, 36; lymphocytes, small, 48; large, 12; eosinophiles, 4; some poikilocytosis; cells staining poorly. At this time two ounces of the father's blood was injected subcutaneously by the citrate method. No change of account was made in the food for some time but there was considerable general improvement. After four weeks two ounces more blood was injected. From this time on there was a gradual change for the better so that at the end of four months the blood count was as follows: Hemoglobin, 65%; red cells, 3,900,000; whites, 8,500; polynuclears, 36; lymphocytes, 61; eosinophiles, 3.

Case 2. Female, 5 months of age, birth weight 4½ pounds, a twin, breast fed, present weight 12 pounds, which has been stationary for some time. This infant was very white, ears transparent, and mucous membranes pale. She did not act sick but was less active and playful than her sister. Blood examination May 20th 1919· Hemoglobin, 30; whites, 5,400; red cells, 3, 150,000; lymphocytes, 68; basophile, 1; nucleated red, 1; polynuclears, 30.

At this time one ounce of mother's blood was injected intramuscularly. June 24th two ounces more of blood was injected. Aug. 24th, 1919, blood examination: Hemoglobin, 65; red cells, 400,000; whites, 9,500; lymphocytes, 63; polynuclears, 26; eosinophiles, 2. Few nucleated red cells. The infant looked better and was gaining in weight. Last report was September 12, 1919, and this time the infant weighed 15 pounds and was doing well.

Case 3. Female. Born May 8, 1916, birth weight, 7¾ pounds. Seemed normal in every respect, cried well at birth, on the 9th, 7.30 a.m. passed a large bloody stool. Temperature normal, took breast well, 10 p.m., another bloody stool. On the 10th, 2 and 4 a.m., bloody stools. Ergot was given at this time. Seen in consultation at 9.30 a.m. Temperature normal, pulse, 170; infant refused to nurse; physical otherwise negative; 30 c.c. of the mother's blood was injected subcutaneously and more blood obtained to prepare serum for later use if needed. At 11.30 bloody stool, 1.30 p.m. nursed well, 2 p.m. a slight blood stained diaper, 9.30 p.m. 15 c.c. serum injected, no stool; 8 a.m., temperature, 103 3/5° F. On the 12th, 5.30 a.m., small dark stool, temperature, 102° F. On the 13th no blood, nursed well and has been normal since.

More cases should be cited but these are illustrative of the conditions previously mentioned.

Book Review.

Venereal Diseases. By C. H. BROWNING, M.D., D.P.H., and DAVID WATSON, M.B., C.M., with an Introduction by SIR JOHN BLAND-SUTTON, F.R.C.S. London: Henry Frowde and Hodder and Stoughton. 1919

This book of 321 pages gives in an exceedingly concise and thorough fashion the diagnosis and treatment of syphilis and gonorrhea. The reader is impressed by the feeling that he is getting first-hand information,—not ideas which are threadbare from having been handed down from one author to another.

No essential facts are missed; the balance of the book is good. This is especially noteworthy in the section on gonorrhea, the treatment of which is exceedingly difficult to describe because of its complexities. The writers have handled this very well, keeping all the while a good perspective. They are not unduly enthusiastic over any one line of treatment but state fairly the value of each.

In some minor points, such as their estimate of the worth of epididymotomy in acute epididymitis, they do not agree with many genito-urinary surgeons. As a whole, their book represents the best in present-day management of syphilis and gonorrhea. The appendix contains many technical details in laboratory procedure in a convenient form for quick reference.

THE BOSTON
Medical and Surgical Journal

Established in 1812

An independently owned Journal of Medicine and Surgery, published weekly under the direction of the Editors and an Advisory Committee, by the Boston Medical and Surgical Journal Society, Inc.

THURSDAY, MAY 6, 1920

SUBSCRIPTION TERMS: *$5.00 per year, in advance, postage paid for the United States, $6.56 per year for all foreign countries belonging to the Postal Union.*

An editor will be in the editorial office daily, except Sunday, from 1o'clock to one p.m.

Papers for publication, and all other communications for the Editorial Department, should be addressed to the Editor, 126 Massachusetts Ave., Boston 17. Notices and other material for the editorial pages must be received not later than noon on the Saturday preceding the date of publication. Orders for reprints must be returned in writing to the printer with the galley proof of papers. The Journal will furnish free to the author, upon his written request, one hundred eight-page reprints without covers, or the equivalent in pages in the case of articles of greater length.

The Journal does not hold itself responsible for any opinions or statements advanced by any contributor in any article published in its columns.

All letters containing business communications, or referring to the publication, subscription or advertising department of the Journal should be addressed to

BOSTON MEDICAL AND SURGICAL JOURNAL
126 Massachusetts Ave., Cor. Boylston St., Boston 17, Massachusetts

MEDICAL PUBLIC SPIRIT OF PHYSICIANS.

THE books and financial conduct of the JOURNAL have been open to the Fellows of The Massachusetts Medical Society ever since it became the official organ of the Society. There have been, however, so many evidences of misunderstanding among the Fellows, which have come to the attention of the editors, that a brief statement concerning the past and present finances of the JOURNAL seems desirable.

When the question of making the JOURNAL the official organ of The Massachusetts Medical Society was under consideration in 1914, the then owners, Dr. William L. Richardson, Dr. Frederick C. Shattuck, and Dr. John C. Warren, felt they should not be asked to assume any new responsibilities that such an affiliation might imply.

Although it had been commonly believed that these gentlemen had derived income from the JOURNAL, the facts of the case were that they had more than once put their hands in their pockets in order that the JOURNAL might continue, and at no time, we believe, had they received any financial return. It was a fine example of medical public spirit silent in the face of misinformed criticism.

The Committee of The Massachusetts Medical Society, who were considering the proposed affiliation, very properly desired to know who would be responsible for the finances of the JOURNAL, before recommending or advising against any affiliation. At this juncture, other younger public spirited physicians agreed to accept this responsibility. These men were Dr. Hugh Williams, Dr. Edward C. Streeter, and Dr. Joel E. Goldthwait. The old owners, believing that the JOURNAL was free from all debts, sold their rights to the new owners for one dollar. When it was determined, after careful investigation, to incorporate the JOURNAL as a charitable institution under the laws of Massachusetts, and to secure the services of a different publisher, it was discovered that the JOURNAL had debts, chiefly to the old publisher, amounting to over five thousand dollars. The old owners, as surprised as the new owners, refused to allow the latter to bear this burden alone, although legally the old owners were not responsible, and these six men assumed and paid the debts out of their own private purses.

The incorporation as a charitable institution was undertaken in order that at no time in the future could any financial profit accrue to the owners. In spite of this published fact, criticisms of the JOURNAL as a money-making scheme continue to be heard. The facts of the matter are as follows:

Neither the old nor the new owners have been paid back the money they advanced, and all have in legal form released the corporation from these debts. The JOURNAL has been run since the affiliation of the Society without loss or further funds from the owners; has paid the Massachusetts Medical Society from its profits five hundred dollars, and has accumulated a small working capital of approximately one thousand dollars. Recently, Dr. Hugh Williams and Dr. Joel E. Goldthwait have resigned as owners of the JOURNAL, and with Mr. Ernest Gregory, the manager, have also resigned from the corporation. It is per-

haps needless but none the less fitting to express to the original and to these later owners, the gratitude of the JOURNAL for their unselfish service and important financial assistance. Dr. Robert M. Green and Dr. George G. Smith have become, with Dr. Edward C. Streeter, the present owners, and with Dr. F. B. Lund have been made members of the corporation.

With this reorganization following the war, the JOURNAL begins the last decade of its first century of continuous existence, the oldest medical weekly in America, independently owned and published by physicians. In the future, as in the past, it will continue to maintain an ethical advertising standard and an independent editorial policy. It relies on the friendly, helpful criticism and cordial support of its contributors, of the Fellows of The Massachusetts Medical Society, and of other members of the profession among its readers, whose interests it will always endeavor to serve with its best ability.

DISTINGUISHED AMERICAN PHYSICIANS.

IT may interest members of the medical profession of today to learn something of a number of American physicians who achieved positions of distinction in this country in days gone by. We are indebted for this information to Dr. Beverley Robinson, who has depicted for us in an article in the *Medical Record* the professional ability and personal characteristics and eccentricities of earlier physicians. We should have been glad to have known the men whom he describes with much charm—the Meigs, father and son, the elder Pepper, Gross, Da Costa, Alonzo Clark, William Parker, and others equally interesting; Loomis, the elder Janeway, the elder and younger Flint; Markoe, Sands, Peters, and their successors, Bull and McBurney.

Dr. Robinson was an assistant to Dr. Alfred L. Loomis, whose clear forceful manner of speaking and whose fund of information expressed with such spirit and enthusiasm was an incentive and inspiration to all his pupils. Loomis believed in teaching positively, stating the facts boldly and refraining as far as possible from speaking of exceptions. In contrast to him was the elder Flint, who preferred to mention exceptions rather than leave it to the students to discover them later on. Dr. Flint had no great faith in drugs, but of two remedies he was especially fond, potassium iodide when a modifying agent was required, and Huxham's tincture of bark.

Dr. Austin Flint is mentioned by Dr. Robinson particularly for his remarkable qualities as a consultant. To young inexperienced physicians, who were struggling to do their best, he listened with interest, examining the patient and suggesting methods of treatment, yet seldom committing himself in matters of diagnosis. Never was his manner more courteous and his personal charm more apparent than when waving aside a patient's questioning relatives and referring them to the family physician.

The attitude of Dr. Charles Meigs reveals one interesting aspect of professional etiquette in former days. Dr. Meigs never sent a bill to his patients; to do so would have lowered in his estimation the high ideals and nobility of his profession. An "honorarium" he would accept gladly if it were sent to him. Physicians in those days lived even more laboriously than do the doctors of today, with few or no amusements, not even a theatre party or a game of cards or billiards. Many of them, fortunately, were men of considerable social position, who had inherited money from their parents.

Of the surgeons, William T. Bull and Charles McBurney, of Francis Delafield, a noted pathologist, there are interesting reminiscences. We are told of Dr. Edward J. Janeway's skill as a diagnostician, of his love and devotion to medicine, and of his accuracy. Dr. Janeway had little faith in drugs, except those of the simplest nature; he would measure a small dose and say, "I would take that myself; I don't believe it will hurt you." Although consulted far and wide, he never took advantage of his professional standing to charge anything but moderate fees.

Then there was T. Gaillard Thomas, and Emmet and Sims, the leading gynecologists; Fordyce Barker and A. A. Smith, obstetricians; Lewis A. Sayre, one of the first orthopedic surgeons; William T. Lusk, an obstetric clinician, and James McLane, through whose efforts was founded the Sloane Maternity Hospital; and Dr. George F. Shrady, editor for many years of the *Medical Record*, and physician to General Grant in his last illness. In answering a question as to how he amused himself, the

words of William L. Polk expressed the general attitude of the profession in his day toward recreation: "I do not. I have never found time and I do not know how. I fought on the southern side in the war of the States, as a private soldier at one time, and I tell you the life of a conscientious successful general practitioner of medicine is more trying and arduous."

THE LEAGUE FOR PREVENTIVE WORK.

Five years ago, in March, 1915, there was organized in Boston a League for Preventive Work, for the purpose of making possible closer coöperation between twenty-two social service agencies in the prevention of some of the causes of misery found among the families in this city. The value of such an association of agencies as a medium both for the exchange of experience and ideas among the members and for the solution of problems arising in connection with individuals and groups outside its own membership has been established. It is hoped that the success of this federation may lead to the organization of a greater undertaking in preventive work—the creation of a Council of Social Agencies in Boston.

The annual report for the year 1918-1919 describes the work which has been undertaken by the League of Preventive Work during the past year. One of its chief fields of activity has been its work with the feeble-minded. There are now 3,238 persons registered by the League and diagnosed as feeble-minded, who have needed help from the social agencies in the State. Through the effort of these agencies, 1,025 of these people are receiving State institutional care; the other 2,213 are in the community without authorized supervision or care. The League has made a study of three hundred families in which there is feeble-mindedness. Massachusetts leads all other states in her care for the mental defective, but to make our present laws function as fully as possible we must have a larger number of trained psychiatrists and special class teachers.

At the suggestion of the Associated Charities, the League has begun a study of the effect of national prohibition upon families socially handicapped by the use of alcohol. The study is divided into two parts: In the first, a careful record is made of the status of these families before July 1, 1919, when the saloons were generally closed; the second part will require a visit to these same families after January 15, 1921, one year after national prohibition. The League has begun to see already some reduction in human misery and crime through prohibition.

The Dietetic Bureau conducted in connection with the League for Prevention Work, has proved itself during the past year to be a vital constructive agency. A study of two hundred families of limited means, in 1917, revealed the fact that while the majority of families were spending enough money for food to feed the family adequately, about one-third were not spending it in a way most likely to develop healthy boys and girls. To meet the various functions of the Bureau, the work has been developed along five distinct lines: (1) Direct work with individual families through nutrition workers who go into homes where there are either malnourished or convalescent children, or adults who are not recovering strength because of insufficient or improper food; (2) nutrition classes for malnourished children in connection with some medical agency where these children are taught how to gain in weight or resistance and inspired through competition to follow out the health rules given them; (3) group and individual conferences and correspondence with social workers, nurses, and others interested in food problems; (4) selecting and arranging such recent scientific data as may be of use in the work; (5) the training of students to enter the field of dietetics in social work. Various examinations of the physical condition of children show a large number who are malnourished because of improper food, while experience has shown that many of these same children improve with a change in dietary habits, frequently without an increase in the amount of money spent for food. A survey of the work accomplished by the Dietetic Bureau during eighteen months shows gratifying results. The growing number of requests for assistance indicates a keener appreciation of what proper food means for the children and the possibility of making conditions more favorable for them in future.

The value of the League for Preventive Work in dealing with emergencies was illustrated by the promptness with which measures were taken to protect the children at the time when a recurrence of the influenza epidemic

was impending. A committee formed of members representing children's agencies arranged for exposed children temporary shelter which could be opened at a day's notice. Fortunately this was not needed, but the action of the League showed the possibilities of mobilized concerted action. The League is looking forward to the formation during the coming year of a Council of Social Agencies in which the constituent agencies of the League may take part in solving through joint action the many difficult problems which confront the social workers of Boston.

MEDICAL NOTES.

CORNELL MEDICAL COLLEGE LECTURES.—During the month of April a course in fractures was given at the Cornell Medical College by Dr. Joseph A. Blake, Dr. George W. Hawley, and Dr. James N. Hitzrot Five. One lecture was delivered by Dr. Alexis Carrel and other exercises were given by Dr. H. H. M. Lyle, Dr. Burton J. Lee, and Dr. John C. A. Gerster.

GIFT OF PORTRAITS TO JOHNS HOPKINS UNIVERSITY.—At the commemoration Day exercises held recently at the Johns Hopkins University, Prof. William H. Welch presented to the University a portrait of Dr. J. Whitridge Williams, dean of the medical school, and a portrait of Dr. Florence R. Sabin, Professor of Histology, was presented by Prof. William H. Howell.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The American Medical Association opened its seventy-first annual session in New Orleans on April 26, 1920. This is the fourth time that the Association has convened in New Orleans. In 1869, after the Civil War, the twentieth annual session under the presidency of Dr. William Owen Baldwin aided in bringing into cordial relationship with the national association members of the medical profession in the South. The thirty-sixth annual session was held in New Orleans in 1885, under the presidency of Dr. Henry F. Campbell. Again in 1903, the Association met for its fifty-fourth session in that city, with Dr. Frank Billings as president. Dr. Alexander Lambert of New York, president of the Association, presided over the annual meeting this year. Dr. William C. Braisted, surgeon-general of the United States Navy, was inducted into the office of president for the ensuing year.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending April 17, 1920, the number of deaths reported was 246 against 226 last year, with a rate of 15.87 against 14.80 last year. There were 38 deaths under one year of age against 27 last year.

The number of cases of principal reportable diseases were: Diphtheria, 27; scarlet fever, 61; measles, 273, whooping cough, 58; typhoid fever, 2; tuberculosis, 55.

Included in the above were the following cases of non-residents: Diphtheria, 2; scarlet fever, 7; whooping cough, 1; tuberculosis, 4.

Total deaths from these diseases were: Diphtheria, 2; scarlet fever, 6; measles, 3; whooping cough, 3; typhoid fever, 1; tuberculosis, 25.

Included in the above were the following non-residents: scarlet fever, 5.

Influenza cases, 12; influenza deaths, 1.

SOMERVILLE MEDICAL SOCIETY.—The following resolutions were unanimously adopted at the meeting of the Somerville Medical Society held April 8, 1920:

Whereas a bill to extend the law requiring the vaccination of children who attend the public schools to the children who attend private schools was under discussion in the Massachusetts State Senate of April 3, 1920, and

Whereas the measure is not a measure of individual rights, but is a measure looking to the protection of the health of the whole community, and

Whereas Senator Joseph O. Knox of Somerville was active in the defeat of this bill and was also active in the support of a bill to repeal the present laws in regard to vaccination,

Be It Resolved, that the Somerville Medical Society places itself on record as advocating without qualification vaccination of all school children as a protection to the community against the ravages in smallpox;

Resolved, that the elected representative of the people who allows his personal feeling to influence him on public measures betrays a trust of the peoples.

Resolved, that the Somerville Medical Society express its condemnation of the actions of Senator Knox as a betrayer of the trust of the people;

Resolved, that the copy of this resolution be placed on the records of the Somerville Medical Society and that copies be sent to Senator Joseph O. Knox, to the representatives in the General Court from Somerville and to the press of Boston and Somerville.

E. H. Robbins, *Sec'y.*

The Faulkner Hospital.—The fifteenth annual report of the Faulkner Hospital, Jamaica Plain, describes the work of the Hospital for the year ending May 1, 1919. During that period the influenza epidemic constituted one of the most serious problems with which it was necessary to deal. For a month in the autumn the hospital was practically given over to the care of influenza cases, and it was necessary to close the Maternity Building from September 19 to October 15. A number of the hospital nurses contracted the disease, and three gave their lives as a result of service to influenza patients. Fourteen graduate nurses served overseas and five of the regular medical and surgical staff were absent on war service. During the year the experiment was tried successfully of having a fourth-year medical student live at the hospital and attend to the routine laboratory work. The Faulkner Hospital Aid Association has undertaken to make the greater part of all the surgical dressings used in the hospital. The hospital is in urgent need of another building for the accommodation of its nurses; the Nurses' Home can provide for only nineteen of the total average of thirty-seven nurses in the service of the hospital.

There were treated altogether a total number of 1,015 patients, 949 of whom were admitted during the year. There were 43 deaths; 341 surgical cases, 226 medical and 191 maternity cases were admitted; 191 babies were born during the year at the hospital. The annual report contains statistics concerning the medical and surgical diseases and operations.

Sale of Army Medical Supplies.—The surplus property division of the Quartermaster General of the Army offers for sale miscellaneous drugs, surgical instruments, hot water bags and hospital equipment to State and municipal hospitals, free clinics and similar institutions, and to persons who served in the Army, Navy, Marine Corps, or the Coast Guard of the United States during the war and who are at the time of the sale licensed to practise medicine. Orders will be received, beginning April 22, 1920, by the Surplus Property Officer, Army Supply Base, South Boston, Administration Building, Room 226.

Baby Hygiene Association.—At the annual meeting of the Baby Hygiene Association of Boston it was reported that over ten thousand babies were cared for during the year 1919 at a total expense of $68,038. Twenty stations are in operation in various parts of the city and the staff includes fifty physicians, nurses, and dietitians. There were made 109.732 visits to homes of children and nearly 50,000 children were in attendance at the conferences. The Association has given considerable attention to child dieteties during the past year, and plans have been completed for extending this work.

Dr. Fritz B. Talbot was reëlected president of the Association, Charles E. Mason chairman of the trustees, Hugh Nawn secretary, and Charles E. Cotting, Jr., treasurer. Mrs. J. Gardner Bradley and Miss Esther G. Barrows were elected trustees for a three-year period.

Harvard University Faculty of Medicine.—A meeting of the Harvard University Faculty of Medicine was held on April 27 for the award of honors to students of medicine. An address was delivered by Roscoe Pound, Ph.D., LL.M., LL.D., D.C.L., Dean of the Faculty of Law, Harvard University. Diplomas were presented to students of the first rank in the second, third, and fourth classes by Dean Edsall. After the meeting an informal reception was held by the Students' Association.

Springfield Academy of Medicine.—The annual meeting of the Springfield Academy of Medicine was held in Springfield on April 13, 1920. An address was made by Dr. Richard M. Smith of Boston on "Some Common Diseases of the New Born." Officers were elected for the year 1920-1921.

Hampden District Medical Society.—The annual meeting of the Hampden District Medical Society was held at the Springfield Acad-

emy of Medicine in Springfield on April 20, 1920. The following papers were read: "Carrel-Dakin Treatment," by Dr. J. M. Gilchrist; "Lethargic Encephalitis," by Dr. F. D. Jones; Report of a Series of Gastrointestinal Cases, by Dr. A. G. Rice. Officers were elected for the ensuing year.

Censors will meet for the examination of candidates at the Springfield Academy of Medicine on May 6, at 4 P.M.

MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE.—The following resolution on the death of Dr. Elmer Ernest Southard has been adopted by the Executive Committee of the Massachusetts Society for Mental Hygiene.

The directors of the Massachusetts Society for Mental Hygiene desire to express their deep sorrow and their great sense of loss in the death of Professor Elmer Ernest Southard. To many of them he was a warm personal friend whom they will sorely miss. His great natural abilities, his extraordinary powers of insight and deduction were most valuable to the society, in which he took an active and stimulating interest.

The directors feel that they have lost not only a most valuable advisor and colleague but one on whose sympathy and friendship they could always depend.

NEW ENGLAND NOTES.

NEW ENGLAND WAR RELIEF FUND.—The following amounts have been announced by various New England War Relief funds:

French Orphanage Fund	$579,761.87
American Committee for Devastated France	199,521.54

Obituaries.

WALLACE HARLOW DEANE, M.D.

DR. WALLACE HARLOW DEANE, a well-beloved practitioner of Springfield, died in that city April 14, 1920, aged 67 years. He was born in West Hartland, Connecticut, attended Wilbraham Academy and graduated M.D., at the Medical School of Yale University in 1877. Dr. Deane settled in Blandford where he was regarded as one of the best all-around country practitioners in that neighborhood. Moving to Springfield in 1887, he joined the Massachusetts Medical Society and continued in active practice until his death, devoting much attention to the care of children. A very positive man, he was lacking somewhat in the polish of cities, but able, fearless and discriminating beyond the ordinary. Pneumonia, following the strain of an arduous practice during the influenza epidemic, was the cause of his death. He is survived by a sister and two brothers.

GEORGE L. UNDERWOOD, M.D.

The subject of this sketch, who recently died in Belmont, was one of the most versatile members of the medical profession of a former generation. He graduated from Harvard College in 1852 and from the Harvard Medical School in '58. Soon afterwards he was appointed superintendent and resident physician at the State Hospital at Rainsford Island, a position that he filled most efficiently until the institution was given up to other uses. He then practiced in Boston for more than thirty years, until compelled to retire by reason of ill health. Practical, resourceful, equal to any emergency, he was an accomplished physician and a most satisfactory consultant.

Dr. Underwood was especially clever in diagnosis and in the use of drugs. The writer is indebted to him for his method of treating senile gangrene and phagedenic ulcers with small, tonic and continuous doses of opium, as well as the value of castor oil in dyspepsia and diarrhea of certain characters. Various methods of treating disease, learned from him, have stood the test of many years' experience. A clear thinker, a close observer, a safe adviser.

His mechanical genius was varied and extensive. He made many of his surgical instruments and appliances. Nothing in relation to his professional needs phased him. The Underwood ether inhaler was in vogue in this vicinity for several years. He also invented a mannikin having hinged and colored panels representing the anatomy of important surgical regions of the body for use in teaching medical students.

While Dr. Underwood gave up Art for Medicine in his early life, yet he never entirely abandoned the calling in which he was much interested, but spent more or less of his time in sketching and in painting in water colors. Some of his work is still extant among his friends and possesses a good deal of merit. He was also skillful at wood carving and did something in modelling. On the advent of the dry plate in photography, he took up this art and in the early days made and coated his own dry plates. He also built his own cameras and was one of the first to use an instantaneous shutter, planned after his own ideas. He perfected a form of shutter, the curtain having an aperture, similar to one that was afterwards used and patented by one of the large photographic manufacturers.

As a young man, the Doctor was much interested in Natural History. He collected a large number of the smaller New England birds, using therefor a blowgun, like a large beanblower, about nine feet in length with balls of putty for ammunition. In this manner he secured birds as large as the golden-winged woodpecker. Being an expert taxidermist, he mounted and placed these birds himself, even manufacturing, true to life, their glass eyes. Furthermore, he made the cabinets in which to mount and preserve them. He was also an adept at coloring lantern slides and was one of the first to find out by experiment and to use the methods of laying on the colors that are used in Japan today.

Dr. Underwood was an omnivorous reader in English, Latin and French. He read the Latin Bible through several times. He was a man of wide intelligence. Positive in his opinions, he had the courage of his convictions. He shunned publicity, wrote little, was not prominent at medical or other meetings, and declined hospital positions that were at his command. He was kind, thoughtful, affectionate, and a most interesting companion; loyal to his friends, to his patients, and to his profession. An invalid for some years, yet he was seldom, if ever, despondent. He took a philosophical view of life, with the Golden Rule as his guide. He died in his sleep, as he would have wished, and has left in the minds of his friends a great admiration for his talents and a high appreciation of his fine character.

GEORGE W. GAY, M.D.

Miscellany.

REPORT OF THE JOINT COMMITTEE ON STATE AND NATIONAL LEGISLATION OF THE MASSACHUSETTS MEDICAL SOCIETY AND THE MASSACHUSETTS HOMEOPATHIC MEDICAL SOCIETY.

Vaccination. House 233, requiring vaccination of children attending private schools, was reported unanimously by the Committee on Public Health on March 29. On March 31, it was defeated by the Senate by a vote of 25 to 11.

The petitioners for House 822, providing that compulsory vaccination of children attending public schools be abolished, were given leave to withdraw by the Committee on Public Health on March 31. This report was accepted by the Senate on April 6 by a vote of 25 to 2, and was accepted by the House on April 9.

Thus both bills were killed.

Re Medical Education.

House 1173, providing for two years college training in chemistry, physics, and biology before entering on the study of medicine, was heard by the Committee on Public Health and was referred to the next General Court on March 29. This report was accepted by the Senate on March 31 and by the House on April 5. Thus the bill was killed.

Physical Training in Schools.

The Chamberlain bill, which had been drafted to meet all the objections raised against the various measures first introduced, was defeated in the Senate by a vote of 22 to 12. The vote was as follows:

For rejection—Senators Butler, Churchill, Cooke, Curran, Donovan, Emery, Foley, Griswold, Hardy of Berkshire, Hardy of Worcester, Knox, Martin, McLane, Moulton, Nelson, Prescott, Putnam, Quinn, Reed, Tarbell, Walsh and Winchester—22.

Against rejection—Allen, Bliss, Carrick, Cassasa, Chamberlain, Dahlborg, Finkel, Gibbs, Loring, McIntosh, Nason, Pearson—12.

Paired, for rejection—Senators Curtin, Halliwell; against rejection — Senators Wells, Weston.

Thus this bill was killed.

Maternity Aid.

Senate 506 has been drafted from the various measures proposed and was reported on April 23 by the Committee on Public Health and Social Welfare sitting jointly.

The new bill omits any provision for medical attendance at the time of confinement except in abnormal cases.

Essentially the bill provides for prenatal care, which has been the main factor in reducing maternal and infant mortality.

The bill is printed in full below in order that physicians may consider it fully.

AN ACT

To provide Adequate Care for Mothers and Children during the Maternity Period.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. From and after the first day of December, nineteen hundred and twenty, the department of public health shall have charge of the administration of maternity care, in accordance with the provisions of this act.

SECTION 2. The said department is hereby authorized to furnish, in addition to advice and instruction, nursing and expert prenatal care to pregnant women at home, at some hospital or local clinic at the option of the expectant mother; also nursing or hospital care at the time of confinement if in the judgment of said department the safety of the mother or child requires such care.

SECTION 3. In order to be eligible for the benefits of this act, the expectant mother must agree to accept and carry out such instructions as, in the judgment of the said department, her case requires. All applications for care under this act may be made directly to the said department or through any local board of health or practising physician.

SECTION 4. Maternity cases under this act shall not be given to a city or town physician, in his or her official capacity. The recipient of maternity care under this act, if remaining at home, shall be allowed in all cases to choose her own physician, subject to said physician's acceptance of the fee schedule for such cases, and other rules and regulations of the said department governing this act.

SECTION 5. The said department shall make, and may, from time to time, add to, alter, amend or repeal, such rules and regulations as may be necessary to carry into effect the provisions of this act.

SECTION 6. The said department shall report to the general court on or before February first, nineteen hundred and twenty-two, with such recommendations for the further extension of maternity care during the natal and postnatal periods and for such other assistance to expectant mothers, as it may deem advisable.

SECTION 7. For the purpose of carrying out the provisions of this act, the said department may expend from the treasury of the commonwealth a sum not exceeding two hundred thousand dollars.

It is obvious that if this bill is passed and proves a success other steps must follow.

JAMES S. STONE,
Secretary.

Correspondence.

DOCTORS' FEES.

3 Linden Street, Melrose Highlands, Mass.

Mr. Editor:

Having gone into "personnel" work, I am now making studies of the shortage of women workers in all lines of work, from the Atlantic to the Pacific ocean. I have to interview many manufacturers, and I am surprised at the attitude many of them take toward the medical profession, having been told over and over again that the cheapest kind of labor one can obtain nowadays is the services of physicians.

Last October, 1919, when the National Safety Council met in Cleveland, Ohio, I was present at most of the meetings; even then some manufacturers would laugh when asked how much one ought to pay a physician for doing medical work in their factories. This question of low wages does not affect me personally, but it does hurt to be told so many times that doctors are the only ones who will work "*cheap*."

Is not a doctor "worthy of his hire," or is it because they have no business acumen that they can be hired to do important work for almost nothing when factories have to pay other workers good wages to keep them?

Very truly yours,
ALICE S. CUTLER, M.D.

SOCIETY NOTICES.

NEW ENGLAND PEDIATRIC SOCIETY.—The sixty-fourth meeting of the New England Pediatric Society will be held at the Boston Medical Library, on Friday, May 14, 1920, at 8.15 P.M.

The following papers will be read:

1. The Chemical Factors Involved in the Production of Acidosis, Reginald Fitz, M.D.
Discussion opened by A. W. Sellards, M.D.
2. Recurrent Vomiting as Seen in Private Practice, Richard M. Smith, M.D.
Discussion opened by A. N. Broughton, M.D., P. H. Sylvester, M.D.
3. The Pathology of Dental Infections in Childhood (with lantern slides), Kurt H. Thoma, D.M.D.
Discussion opened by W. C. Miner, D.M.D.

FRITZ B. TALBOT, M.D., *President,*
LEWIS WEBB HILL, M.D., *Secretary.*

NORFOLK DISTRICT MEDICAL SOCIETY.—Seventieth annual meeting, American House, Boston, May 13, 1920.

Order of Exercises: 5.30 P.M. sharp, business meeting.

1. Minutes of previous meeting.
2. Report of Committee.
3. Report of Treasurer.
4. Election of Officers.
5. Incidental Business.

Dinner, 6.15 P.M. sharp.

After the dinner the entertainment committee will present a short play in six scenes entitled "Breaking into the Army" or "It's a Great Life if You Don't Weaken." An assessment of two dollars will be made for the dinner and entertainment.

F. P. DENNY, *President,*
BRADFORD KENT, *Secretary.*

RECENT DEATHS.

DR. WILLIAM HENDERSON RUDDICK, a retired Fellow of the Massachusetts Medical Society, died at his home in South Boston, April 8, 1920, at the age of 75. He was a native of Moncton, N. B. He had served in the Civil War and took up his residence in South Boston at its close, studied at the Massachusetts Institute of Technology, and graduated from Harvard Medical School in 1868. He had been district physician to the Boston Dispensary. He was married in 1872 to Sophia Ada Means, who died in 1901. Two years later he married Margaret Gannon of Charlestown. She survives him.

DR. MARY PARKER died on April 8, at her home in Waltham. Dr. Parker was born in Yarmouth, the daughter of Alfred Wright Parker. She was a graduate of the Woman's Medical College in Philadelphia, and in 1910 was graduated from the Hahnemann Medical College of Chicago. She practised for several years in Framingham and later in Waltham. For some time she had conducted clinics at the Massachusetts Homeopathic Hospital. Dr. Parker is survived by her aunt, Miss Charlotte Hallett of Waltham.